Renormalization conjecture and rigidity theory for circle diffeomorphisms with breaks. (English summary)


Summary: “We prove the renormalization conjecture for circle diffeomorphisms with breaks, i.e., that the renormalizations of any two $C^{2+\alpha}$-smooth ($\alpha \in (0,1)$) circle diffeomorphisms with a break point, with the same irrational rotation number and the same size of the break, approach each other exponentially fast in the $C^2$-topology. As was shown in [KKM], this result implies the following strong rigidity statement: for almost all irrational numbers $\rho$, any two circle diffeomorphisms with a break, with the same rotation number $\rho$ and the same size of the break, are $C^1$-smoothly conjugate to each other. As we proved in [KK13] [MR3061428], the latter claim cannot be extended to all irrational rotation numbers. These results can be considered an extension of Herman’s theory on the linearization of circle diffeomorphisms.”

References

35. E. C. G. Stueckelberg, and A. Petermann. La normalisation des constantes


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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